

REMARKS

In view of the above amendments and the following remarks, Applicant requests favorable reconsideration and allowance of the above-identified application.

Claims 1, 5-9 and 11-31 remain pending in this application, with Claims 1, 17, 22 and 27 being independent.

Claims 27-30 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Office Action states that Applicant has not provided a detailed description of the "photo-catalyst" recited in Claim 27, and that such lack of a detailed description implies that the photo-catalyst is generally known in the art. Based on those assertions, the conclusion is drawn in the Office Action that there is no justification as to why such subject matter already known in the art could be "valued as a patentable invention." Applicant respectfully traverses this rejection.

The proper test for compliance with the written description requirement is whether Applicant has conveyed "with reasonable clarity to those skilled in the art that . . . [the inventor] was in possession of the invention" at the time of filing. MPEP 2163.02. The assumption in the Office Action that the term photo-catalyst is readily understood by those of skill in the art rebuts the position that the written description requirement has not been met. Specifically, if one of ordinary skill in the art would understand the meaning of a photo-catalyst, as set forth in the specification and claims, a rejection under 35 U.S.C. § 112, first paragraph, is improper. Further, the implication that Claim 27 cannot be considered patentable if it is based on features known in the art is unrelated to the written

description requirement, and more properly pertains to whether the invention is patentable over the prior art. In that case, all of the features of Claim 27, not just the photo-catalyst, should be considered in determining the allowability of that claim. Accordingly, Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. § 112, first paragraph.

Claims 1, 5-9, 11-13, 17, 18, 20, 22, 23 and 25 stand rejected under 35 U.S.C. § 102 over U.S. Patent No. 6,268,904 (Mori, et al.). Claims 14-16, 19, 21, 24 and 26 stand rejected under 35 U.S.C. § 103 over the Mori, et al. patent in view of general knowledge in the art. Claims 14 and 15 also stand rejected under 35 U.S.C. § 103 over the Mori, et al. patent in view of U.S. Patent Nos. 5,315,793 (Peterson, et al.) and 5,959,297 (Weinberg, et al.).

As recited in independent Claim 1, Applicant's invention is directed to an optical instrument having a detector, ozone supplying means and cleaning means. The detector detects an impurity concentration in an ambience of a space surrounding an optical element. The ozone supply means supplies ozone into the ambience. The cleaning means cleans the ambience, by use of the ozone, when the impurity concentration detected by the detector is not less than a predetermined value.

As recited in independent Claim 17, instead of using ozone supplying means, the cleaning means cleans an ambience by projecting light to oxygen supplied to the ambience by oxygen supplying means, to produce ozone or active oxygen, when a detector detects that an impurity concentration is not less than a predetermined value. With respect to independent Claim 22, the cleaning means cleans the ambience by generating a photochemical reaction by projecting light into the ambience using light projecting means,

when the detected impurity concentration is not less than a predetermined value. With respect to independent Claim 27, the cleaning means cleans the ambience by generating a photochemical reaction by use of a photo-catalyst, when the detected impurity concentration is not less than a predetermined value.

Applicant notes that the Mori, et al. patent describes a detector 24 that can detect a light quantity passing through a projection lens 21; however, Applicant submits that detector 24 does not detect an impurity concentration in the ambience around an optical element. More specifically, some impurities within the ambience can absorb light directly, but others absorb light after they adhere to a surface of an optical element. In accordance with the present invention, impurities in the ambience that may absorb light directly and impurities which may absorb light after they adhere to the optical element are both detected, unlike the system described in the Mori, et al. patent. On the basis of the detected impurities, cleaning is carried out. Thus, the present invention provides significant advantages over the system described in the Mori, et al. patent, inasmuch as impurities which have a possibility of absorbing light after they adhere to the surface of an optical element are detected and removed by cleaning.

The Peterson, et al. patent is merely cited in the Office Action as describing a detector for detecting concentrations of organic substances. The Weinberg, et al. patent is merely cited as describing the detection of low concentration levels of organic contaminants. However, Applicant submits that these documents fail to remedy the deficiencies discussed above with respect to the Mori, et al. patent.

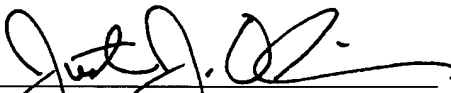
Accordingly, Applicant submits that the Mori, et al., Peterson, et al. and Weinberg, et al. patents, taken alone or in combination, fail to disclose or suggest, at least, (i) cleaning means for cleaning the ambience by use of ozone supplied by ozone supplying means, when the impurity concentration detected by a detector is not less than a predetermined value, as recited in independent Claim 1; (ii) cleaning means for cleaning the ambience by projecting light to oxygen supplied by oxygen supplying means, to produce ozone or active oxygen, when the impurity concentration detected by a detector is not less than a predetermined value, as recited in independent Claim 17; (iii) cleaning means for cleaning the ambience by generating a photochemical reaction in the ambience by projecting light thereto using light projecting means, when the impurity concentration detected by a detector is not less than a predetermined value, as recited in independent Claim 22; (iv) cleaning means arranged to generate a photochemical reaction by use of a photo-catalyst, thereby to clean the ambience, when the impurity concentration detected by a detector is not less than a predetermined value, as recited in independent Claim 27.

For the foregoing reasons, Applicant submits that the independent claims are distinguishable over the applied references, and requests withdrawal of the rejections under 35 U.S.C. §§ 102 and 103.

The remaining claims in the present application are dependent claims which depend from the independent claims, and thus are patentable over the documents of record for reasons noted above with respect to those claims. In addition, each recites features of the invention still further distinguishing it from the applied references. Applicant requests favorable and independent consideration thereof.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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